

(11) EP 1 043 874 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 05.11.2003 Bulletin 2003/45

(51) Int CI.7: **H04L 27/26**

- (43) Date of publication A2: 11.10.2000 Bulletin 2000/41
- (21) Application number: 00302973.3
- (22) Date of filing: 07.04.2000
- (84) Designated Contracting States:
 AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU
 MC NL PT SE
 Designated Extension States:
 AL LT LV MK RO SI
- (30) Priority: 07.04.1999 GB 9907924
- (71) Applicant: BRITISH BROADCASTING CORPORATION
 London W1A 1AA (GB)
- (72) Inventors:
 - Nokes, Christopher Ryan c/o BBC Res.& Dev. Dept. Tadworth, Surrey KT20 6NP (GB)

- Haffenden, Oliver Paul c/o BBC Res.& Dev. Dept.
 Tadworth, Surrey KT20 6NP (GB)
- Mitchell, Justin David c/o BBC Res.& Dev. Dept. Tadworth, Surrey KT20 6NP (GB)
- Robinson, Adrian Paul c/o BBC Res.& Dev. Dept. Tadworth, Surrey KT20 6NP (GB)
- Stott, Jonathan Highton c/o BBC Res.& Dev. Dept. Tadworth, Surrey KT20 6NP (GB)
- Wiewiorka, Adam c/o BBC Res.& Dev. Dept. Tadworth, Surrey KT20 6NP (GB)
- (74) Representative: Abnett, Richard Charles
 REDDIE & GROSE
 16 Theobalds Road
 London WC1X 8PL (GB)

(54) Detection and removal of clipping in multicarrier receivers

(57) A COFDM receiver includes a tuner/demodulator (34), an analog-to-digital converter (36), an impulse processor (38), and an OFDM demodulator (40). The

impulse processor detects digital values which equal the clipping level in the ADC, and assumes that these represent impulsive interference. These samples are then replaced by samples of zero value.

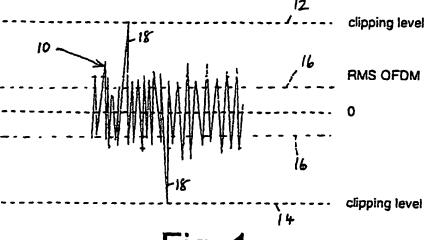


Fig. 1



EUROPEAN SEARCH REPORT

Application Number EP 00 30 2973

	DOCUMENTS CONSIDE	RED TO BE RELEVANT		
Category	Citation of document with income of relevant passage		Relevant to claim	CLASSIFICATION OF THE APPLICATION (INLCL.7)
x	USA, vol. 2, 23 May 199 784-788, XP00037119 ISBN: 0-7803-0950-2	ES FOR MULTICARRIER INTERNATIONAL NICATIONS (ICC). , 1993, IEEE, NEW YORK, 3 (1993-05-23), pages	1-10	H04L27/26
x	5 April 1988 (1988-	- column 6, line 52 *	1-10	
X	EP 0 869 624 A (AT 7 October 1998 (199 * column 15, line 2 * figure 16C *	8-10-07)	1-10	TECHNICAL FIELDS SEARCHED (INLCLT)
E	WO 01 52494 A (KONI NV) 19 July 2001 (2 * page 5, line 18 - * page 6, line 31 -	line 29 *	1-10	
	The present search report has		<u> </u>	
	Place of search	Date of completion of the search	2	Examiner C
	THE HAGUE	12 September 200		ozco Roura, C
X: psi Y: psi doc A: teo O: no	ATEGORY OF CITED DOCUMENTS fluxisity relevant if taken alone tioularly relevant if combined with anot sument of the same outagory thrological background n-written disclosure ermadists document	T : theory or principl E : earlier patient do efter the filting da. her D : document olded L : document olded a: marriber of the s document	oument, but pub le in the application or other reasons	Rished on, or

ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 60 30 2973

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

12-09-2003

Patent document cited in search repor	t	Publication date		Patent family member(s)		Publication date
US 4736163	A	A 05-04-1988	NL DE FR GB JP JP	3525472 2568014 2162408 2063654 7105692	A1 A1 A ,B C B	17-02-1986 30-01-1986 24-01-1986 29-01-1986 24-06-1996 13-11-1995 25-02-1986
EP 0869624	A	07-10-1998	JP KR US CA CN EP	9307298 6167133 2233424 1195932	A B1 A A1 A A2	94-98-1993
WO 0152494	Α	19-07-2001	JP BR WO EP JP US	9998822 9152494	A A1 A1 T A1	23-10-1998 15-01-2002 19-07-2001 02-01-2002 02-07-2003 09-08-2001